have the same root, and receive their power from the same source; and that when injured in their common origin, there is a simultaneous cessation of motion in all the apparatus of respiration, that breathing instantly ceases, and with it life.

Touching on Pathology, he assigns reasons for believing that sudden death, when there is no apparent injury of vital organs, is by disorder of this division of the nervous system.

Having distinguished these nerves from the common voluntary and sensible nerves on the one hand, and from the sympathetic system on the other, he proceeds to show that expression is seated in these nerves. That they are not merely the nerves which order the motions of breathing, the nerves of natural and articulate language, but that through them the breast, chest, and face become the organs of expression, whenever the heart is agitated by sentiment or passion; and that without their instrumentality, the utmost agitation of the spirits in passion would be attended with no outward sign.

*Experiments and Observations on the Newry Pitch-stone, and its Products, and on the Formation of Pumice. By the Right Hon.* George Knox, *F.R.S.* Read May 9, 1822. [*Phil. Trans.* 1822, *p.* 313.]

After describing the geological locality and the external character of the above mineral, and adverting particularly to its oily smell, Mr. Knox proceeds to show, by its chemical analysis, that, exclusive of the constituents of this substance ascertained by Klaproth, it contains a considerable but variable proportion of a peculiar bitumen, separable from it by distillation at high temperatures. The author also succeeded in detecting some volatile principle in the pitch-stone of Meisser, analysed by Klaproth, as also in that of Arran; but it exists in them in smaller quantities than in the pitch-stone of Newry.

After having separated the water and bitumen from the mineral by heat, Mr. Knox found that by subjecting the residue to a bright red heat, it assumed not merely the appearance, but the properties of pumice; and he attributes this appearance to the slow escape of the bituminous matter, producing a vesicular structure.

The author details in this paper the process of analysis which he employed for the separation of the constituent parts of this pitch-stone, and adverts to those circumstances in which it appears to differ from the varieties of the mineral previously examined.

*Observations on the Changes the Egg undergoes during Incubation in the common Fowl, illustrated by Microscopical Drawings. By Sir* Everard Home, *Bart. V.P.R.S.* Read May 16, 1822. [*Phil. Trans.* 1822, *p.* 339.]

The molecule from which the future embryo is to be formed, is observed upon the surface of the yolk before it leaves the ovarium. It consists of globules $\frac{1}{2\,8\,0\,0}$th of an inch in diameter, surrounded by a mixture of these and larger oval globules, similar to those of the